Federal Network Management Market

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Overview

- Market Structure and Environment
- Market Analysis and Forecast
- Agency Conditions
- Agency Perceptions
- Conclusions

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Network

- Electronic interconnection between sites
  - Links between central computer sites or remote locations, and
  - Switching and/or regional data processing nodes

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Networks Include

- Data, voice, video, and text
- Service delivered over dedicated and/or switched facilities

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Network Management

Management of all or a significant portion of a network under a long-term contract

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Added for this Report

- Hardware
- Software
- Other professional services

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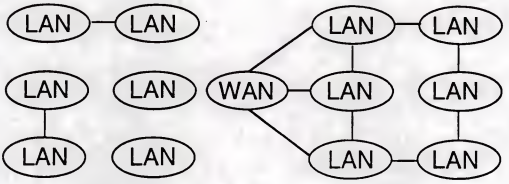
Federal Local-Area Networks



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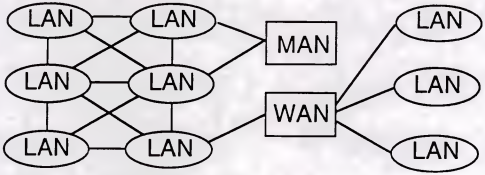
Federal Enterprise Networks



LAN: Local-Area Network
MAN: Metropolitan-Area Network
WAN: Wide-Area Network

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WAN/LAN Characteristics

	WAN	LAN
Data Type	Data	Information
Access	Controlled	Limited control
Volume	Predictable	Unpredictable

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WAN/LAN Characteristics

	WAN	LAN
Changes	Controlled	Uncontrolled
Speed	2.4-9.6 Kbps	150+ Mbps
Security	Network specific	Limited

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Market Pressures

- Budget and deficit reduction
- Policy and regulation
- FTS 2000
- Interoperability
- EDI/E-Mail
- Technological advances
- Vendor competition

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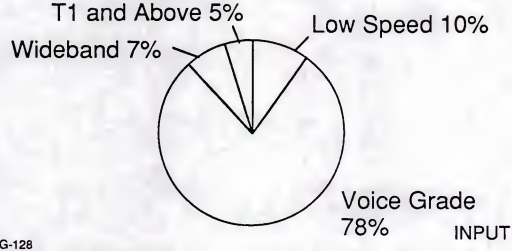
Federal Wide-Area Network Types



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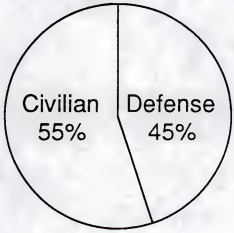
Wide-Area Networks
Civilian versus Defense



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Wide-Area Network Circuits Leading Civilian Departments

	Number Reported
Energy	2,480
Postal Service	1,830
Veteran Affairs	1,825

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Wide-Area Network Circuits Leading Civilian Departments

	Number Reported
Health/Human Services	1,500
NASA	1,415
Treasury	1,200

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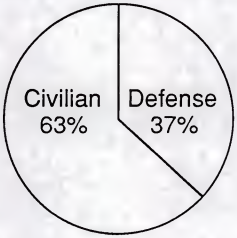
Local-Area Networks
Civilian versus Defense



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Local-Area Networks
Leading Civilian Departments

	Percent by Type			
	Ether	Token	FDDI	Other/ Unk
Energy	43	7	10	40
Veterans Affairs	26	3	27	43
NASA	57	2	28	13

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Local-Area Networks
Leading Civilian Departments

	Percent by Type			
	Ether	Token	FDDI	Other/ Unk
Health	36	7	7	50
Federal Reserve	82	8	-	11
Transportation	61	5	2	32

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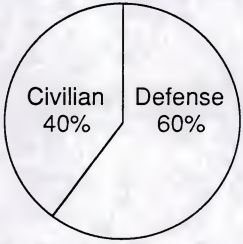
Network Management Services
Civilian versus Defense



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Network Management Services Leading Civilian Departments

- Transportation
- Treasury
- Health/Human Services
- Interior
- Commerce

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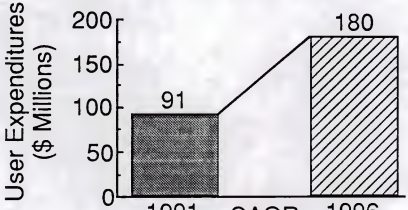
Federal Network Management Market, 1991-1996



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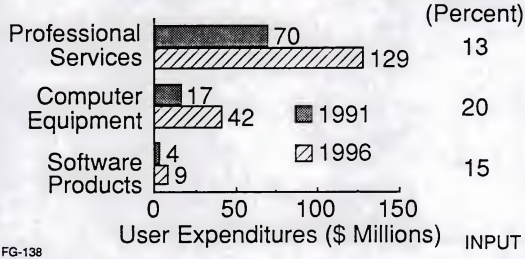
Federal Network Management Market, 1991-1996



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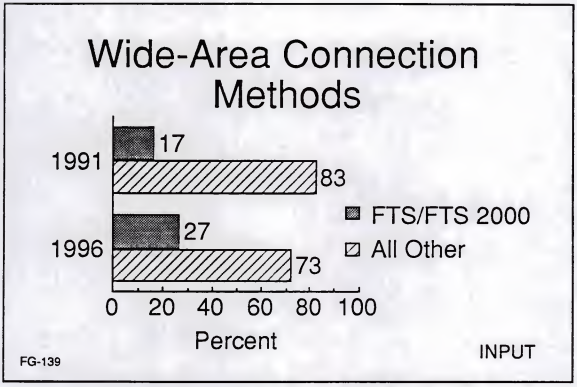

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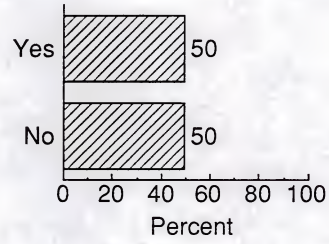
Network Control Centers



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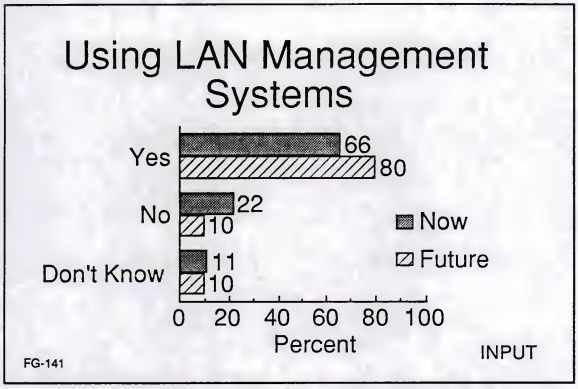

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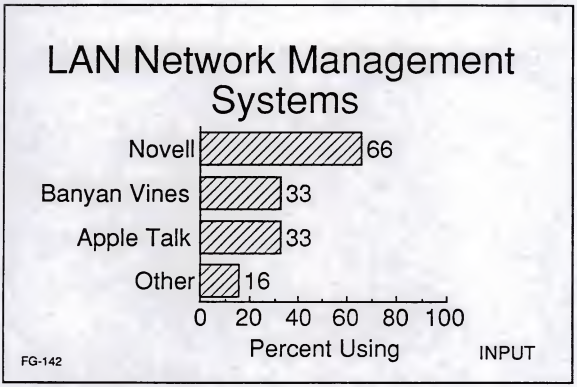

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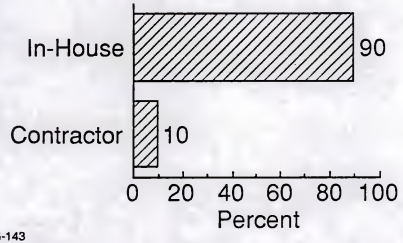
Network Management Approach



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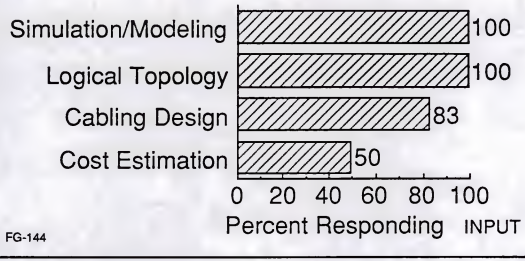
LAN Management Product Features



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Key Management Considerations

- Staff requirements
- Management requirements
- Information dissemination
- Information/data security

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Reasons for Wide-Area Networks

- Customer/application requirements
- Resource/technology availability
- Interface compatibility
- Evolution

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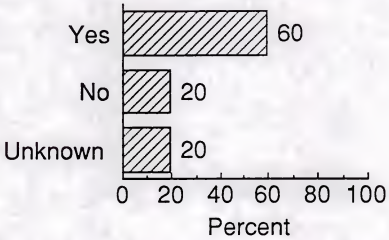
Enterprise Network Interest



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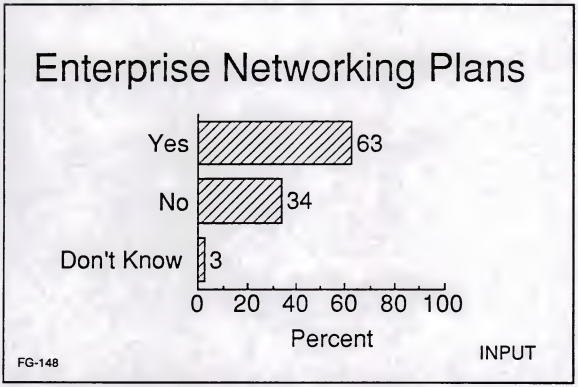

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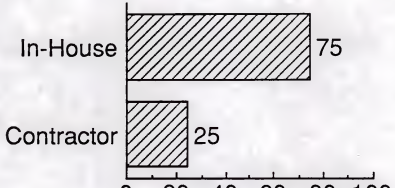
Network Management Approach



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Wide-Area Network Management Approach

- Netview
- Modem control systems
- TI control systems
- Other

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Enterprise Network Management Needs

- Standards
- Integrated management tools
- Management commitment
- Consistent network structure

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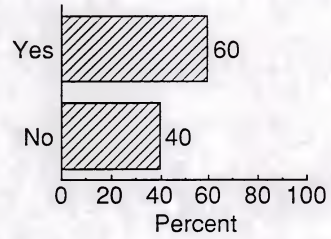
Technology Availability



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Conclusions

- Single network management focus to date
- Few integrated network management products
- Wide-area broadband needed for future

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Conclusions

- High interest in enterprise networks
- Agency evolution plans optimistic
- Enterprise network growth will be slow

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Conclusions

- Significant help needed to understand enterprise
- Networking complexity
- Integrated network management products needed

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Recommendations

- Educate users
- Focus on network planning
- Establish system/network vendor alliances
- Develop integrated network management solutions

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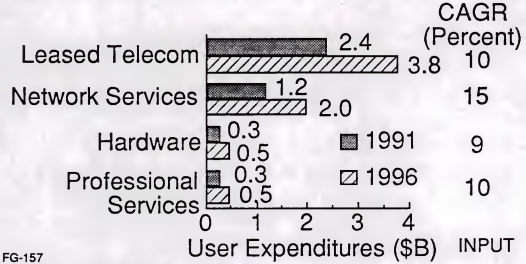
Communications and Network Services Market



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